Paper No. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PETER G. ODELL,
STEPHAN V. DRAPPEL and
MICHAEL S. HAWKINS

Appeal No. 1996-1788
Application 08/158,580[1]

ON BRIEF

Before CAROFF, ELLIS, and LIEBERMAN, Administrative Patent Judges.

CAROFF, Administrative Patent Judge.

DECISION ON APPEAL

This decision on appeal relates to the final rejection of claims 1-12, 22-25 and 28-32. Claims 13-21 and 26-27, the other claims remaining in the application, stand withdrawn

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[1] Application for patent filed November 29, 1993.

from consideration by the examiner pursuant to 37 CFR § 1.142(b) as being directed to a non-elected invention and, thus, are not before us.

The claims on appeal are directed to a reactive melt mixing process involving the use of a reactive base resin, an initiator and a polyester with amine functionality to form a crosslinked toner resin. Claim 1 is illustrative:

1. A reactive melt mixing process for the preparation of a low fix temperature toner resin, consisting essentially of:

(a) mixing a reactive base resin, an initiator, and a polyester with amine functionality, and

(b) crosslinking the resulting polymer melt under high shear to form a crosslinked toner resin, and wherein there occurs a reaction between said initiator and said amine functionality thereby forming free radicals which attack the unsaturated sites of the base resin causing crosslinking thereof, and wherein said crosslinked toner resin is substantially free of sol.

The examiner relies upon the following prior art references as evidence of obviousness:[2]

Fuller et al. (Fuller)	5,166,026	Nov. 24, 1992
Wilson et al. (Wilson)	5,194,472	Mar. 16, 1993
Mahabadi et al. (Mahabadi I)	5,227,460	July 13, 1993

[2]The examiner's answer (page 2) indicates that another prior art reference (McCabe et al.) is no longer relied upon in rejecting the claims.

Mahabadi et al. (Mahabadi II)	5,352,556	Oct. 4, 1994 (filed March 23, 1993)

The following rejections are before us for consideration:

I. Claims 1 and 30 stand rejected for indefiniteness under 35 U.S.C. § 112, second paragraph.

II. Claims 1-12, 22-25 and 28-32 stand rejected for obviousness under 35 U.S.C. § 103 in view of Mahabadi I or Mahabadi II[3] taken in combination with Wilson and Fuller.

Based on the record before us, we cannot sustain either of the rejections at issue. Instead, we shall apply a new ground of rejection under 35 U.S.C. § 112, second paragraph.

Turning first to the examiner's rejection under 35 U.S.C. § 103, we conclude that the examiner has failed to establish a prima facie case of obviousness. In this regard, we note that the claimed invention involves a three-component mixture including a polyester with amine functionality; whereas Mahabadi involves reactive melt mixing of only two essential components, i.e., an unsaturated base resin, such as

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[3]Consideration of Mahabadi II is superfluous as it merely represents a division of Mahabadi I. Accordingly, consideration of the Mahabadi disclosure will be solely by reference to Mahabadi I.

Furthermore, we note that the rejection of claim 4 is moot since claim 4 was cancelled by amendment (Paper No. 3) prior to the final rejection.

unsaturated polyester resin, and an initiator. Further, the examiner recognizes that Mahabadi makes no reference to any polyester with amine functionality. Contrary to assertions made by the examiner, we find no basis whatsoever for a conclusion that either Wilson or Fuller discloses any aminated polyester as such, let alone providing any motivation for using an aminated polyester in the reactive melt mixing process of Mahabadi. We agree with appellants that whatever quaternary amine compound may be disclosed in Wilson is not reacted with a thermoplastic polymer but, rather, is present in toner particles as a separate component dispersed in a polymer matrix phase (Wilson: col. 5, l. 65-67). Similarly, we find no disclosure in Fuller of any polyester with amine functionality; nor has the examiner pointed out - by column and line - any specific disclosure by Fuller of an aminated polyester.

With regard to the case for indefiniteness, we cannot agree with the examiner that the expression "substantially free of sol" has no fixed or definite meaning. Merely because the word "substantially" may be broad in scope does not necessarily render it indefinite. As appellants note, page 28

of their specification gives an indication as to what is meant by the purportedly indefinite expression in terms of gel contact. Moreover, "substantially" is used extensively in a similar context in Mahabadi (see col. 5, l. 41-46; col. 8, l. 40-42) and, thus, its metes and bounds presumably would be understood by those versed in the art.

We also disagree with the examiner that the phrase "the resulting polymer melt" lacks antecedent basis. Adequate antecedent basis may be reasonably inferred from the preamble recitation relating to "melt mixing." The reasonable inference to be drawn is that "the resulting polymer melt" refers to the product which is formed during the mixing operation previously recited in step (a) of the claim.

For the foregoing reasons, the decision of the examiner is reversed.

Rejection Under 37 CFR § 1.196(b)

In accordance with the provisions of 37 CFR § 1.196(b), we hereby apply the following new ground of rejection:

Claims 1-3, 10-12, 22-24, and 28-32 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. There is lack of antecedent basis in the subject claims for

the phrase "the unsaturated sites in the base resin." This deficiency is all the more glaring considering that appellants' specification (p. 1, l. 14-22; p. 7, l. 14-20) suggests that appellants regard unsaturated sites in the base resin as being an essential aspect of their invention. Accordingly, in order to obviate this rejection appellants should provide antecedent basis in their claims by indicating that the reactive base resin of step (a) is an unsaturated resin or that it contains at least one unsaturation site.

This decision contains a new ground of rejection pursuant to 37 CFR § 1.196(b) (amended effective Dec. 1, 1997, by final rule notice, 62 Fed. Reg. 53,131, 53,197 (Oct. 10, 1997), 1203 Off. Gaz. Pat. & Trademark Office 63,122 (Oct. 21, 1997)). 37 CFR § 1.196(b) provides that "[a] new ground of rejection shall not be considered final for purposes of judicial review."

37 CFR § 1.196(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of proceedings (37 CFR § 1.197(c)) as to the rejected claims:

> (1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the application will be remanded to the examiner. . . .
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> (2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record. . . .

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

REVERSED
NEW GROUND OF REJECTION UNDER 37 CFR § 1.196(b)

MARC L. CAROFF Administrative Patent Judge	)	
JOAN ELLIS Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
PAUL LIEBERMAN Administrative Patent Judge	)	

MLC:svt

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